



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,508	02/12/2004	Alfredo Aldereguia	RPS9 2003 0207 US1	5244
56102	7590	11/01/2007		
IBM (RPS-BLF) c/o BIGGERS & OHANIAN, LLP P.O. BOX 1469 AUSTIN, TX 78767-1469			EXAMINER CHU, WUTCHUNG	
			ART UNIT 2619	PAPER NUMBER
			MAIL DATE 11/01/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

TH

**Office Action Summary**

Application No.

10/777,508

Applicant(s)

ALDEREGUIA ET AL.

Examiner

Wutchung Chu

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/12/2004</u>   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION*****Drawings***

1. The drawings are objected to because figures 2 and 3 all numeral references are not labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37

Art Unit: 2619

CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

***Claim Objections***

3. Claim 7 is objected to because of the following informalities: the term "interconections" is misspelled. Appropriate correction is required.
4. Claim 18 is objected to because of the following informalities: claim 18 depends on a succeeding claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 8-10, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Leigh (US2003/0158940).

**Regarding claim 1**, Leigh disclose method for integrated load balancing among peer servers (**see paragraph 7**) comprising:

- a first set of central processing units (**see paragraph 29 CPUs**);
- a first system memory accessible to the first set of processors (**see paragraph 29 processors**);

- scalability logic to connect the data processing system to a second data processing system, having a second set of processors and a second system memory, to form a scaled system **(see paragraph 29 and figure 1c);**
- a set of scalability ports connected to the scalability logic to receive scalability cables connecting the first system to the second system **(see paragraph 29 and figure 1a-d);** and
- system management to cause each of the system's scalability ports to issue an identifiable signal **(see paragraph 30 request)** and further configured to detect the reception of an identifiable signal **(see paragraph 30 ILB 50 acknowledges the load shedding request from ILB 10)**, sent by another system, by any of the scalability ports and to report the reception of the signal to a system management of the second system to determine which ports of the two systems are connected by the cable **(see paragraph 47 and figure 1 a-d each port knows the ID of the port of ports to which it is directly connected).**

**Regarding claim 2,** Leigh teaches the system management includes a service processor connected to the system via an adapter card and wherein the service processor is connected to a service processor of other systems via a network medium **(see paragraph 49 figure 1a-d and figure 3 zone A-D ref311-4 and ref306 external network).**

**Regarding claim 8,** Leigh teaches a method of determining scalability cabling between at least two scalable data processing systems, comprising:

Art Unit: 2619

- driving an identifiable signal on a first scalability port of a first system (**see paragraph 30 request**);
- responsive to receiving the identifiable signal by a second system, determining which scalability port of the second system received the distinctive signal (**see paragraph 30 acknowledge**);
- informing the first system of the reception of the distinctive signal (**see paragraph 30 acknowledge**) by the determined scalability port of the second system and recording the first scalability port of the first system and the scalability port of the second system as being connected by a scalability cable (**see paragraph 30 ILB 0 provides ILB 10 with a list of ILBs that can accept the load and with the load-shedding conditions**).

Regarding claim 9, Leigh teaches further comprising detecting a timeout by the first system and, responsive thereto, identifying the first scalability port as being unconnected (**see paragraph 47 port 24 know it is not connected and figure 1b ref24**).

Regarding claim 10, Leigh teaches further comprising, iterating the sequence of claim 8, until all scalability ports have been accounted for (**see paragraph 47 and figure 1a-d and paragraph 30 ILB 0 provides ILB 10 with a list of ILBs that can accept the load and with the load-shedding conditions**).

Art Unit: 2619

**Regarding claims 15-17**, Leigh teaches programming (**see paragraph 42**) and disclose all the limitations as discussed in the rejection of claims 8-10 and are therefore claims 15-17 are rejected using the same rationales.

***Claim Rejections - 35 USC § 103***

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 6-7, 11-12, 14, 18-19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh in view of Nakamura (US2004/0057448).

**Regarding claims 3 and 14**, Leigh disclose all the subject matter of the claimed invention with the exception of

- the system management causes a scalability port to issue an identifiable signal by causing the assertion of a bit in a register corresponding to the set of scalability ports.

- determining the scalability port that received the signal includes reading the bits in a register associated with scalability port.

Nakamura from the same or similar fields of endeavor teaches the use of the communication ports of those nodes are assigned port numbers to identify these ports, the 1394 interface of each node automatically recognizes a new connection configuration, and assignment of node IDs (see Nakamura paragraph 122 and paragraphs 179 and 180 where node ID is being assigned and paragraph 152 communication ports of those nodes are assigned port number to identify these ports and paragraph 155 nodes declare parent-child relationships among their communication port, therefore when assigning node ID, ports are also assigned with their relationship to other nodes and figure 6 ref602 node ID# and figure 14, fig. 15 fig. 16), and upon receiving the self ID packet, each node can recognize the node numbers assigned to the respective nodes and can detect a node number assigned to itself (see Nakamura paragraph 187). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the assigning node ID and identify communication ports as taught by Nakamura in the integrated load balancing among peer server of Leigh in order to enhance system efficiency.

**Regarding claim 6**, Leigh teaches identifying the corresponding scalability port open (see Leigh paragraph 47 and figure 1b port 24) and disclose all the subject matter of the claimed invention with the exception of the system management includes means for determining a timeout condition following assertion of a bit.



Art Unit: 2619

Nakamura from the same or similar fields of endeavor teaches the use of the communication ports of those nodes are assigned port numbers to identify these ports, the 1394 interface of each node automatically recognizes a new connection configuration, and assignment of node IDs (**see Nakamura paragraph 122 and paragraph 152-162 and figure 6 ref602 node ID# and figure 14, fig. 15 fig. 16**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the assigning node ID and identify communication ports as taught by Nakamura in the integrated load balancing among peer server of Leigh in order to enhance system efficiency.

**Regarding claim 7**, Leigh disclose all the subject matter of the claimed invention with the exception of the system management further includes code means for using the scalability information to generate a graphical image of scalability interconnections.

Nakamura from the same or similar fields of endeavor teaches the use of display function (**see Nakamura paragraph 236 and 237**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the display function as taught by Nakamura in the integrated load balancing among peer server of Leigh in order to provide enhance efficiency in system monitoring.

**Regarding claims 11-12, 18-19, and 21**, Leigh and Nakamura disclose all the limitations as discussed in the rejection of claims 3, 7, and 14 and are therefore claims 11-12, 18-19, and 21 are rejected using the same rationales.

Art Unit: 2619

10. Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh and Nakamura further in view of Vegter (US.6286073).

**Regarding claim 4 and 5**, Leigh and Nakamura disclose all the subject matter of the claimed invention with the exception of

- the scalability port register is implemented in a programmable logic device.
- the system management further includes controller logic connected to the service processor via a dedicated serial connection and connected to the programmable logic device via an I2C bus.

Vegter from the same or similar fields of endeavor teaches the use of I2C control block may be a programmable logic array (**see Vegter col. 3 lines 21-42**).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the programmable logic array as taught by Vegter in the modified integrated load balancing among peer server of Leigh and Nakamura in order to provide enhance efficiency in system monitoring solution for interfacing integrated circuits to one another, when it is necessary to interface an external I2C device with a personal computer, additional hardware is typically needed which is expensive, cumbersome to use and not versatile. Thus, the integrated circuit art has not heretofore created a solution for simple and effective I2C interfacing between a personal computer and any I2C device (**see Vegter col. 1 lines 46-54**).

11. Claims 5, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh in view of Vegter (US.6286073).

**Regarding claim 5**, Leigh disclose all the subject matter of the claimed invention with the exception of

- the system management further includes controller logic connected to the service processor via a dedicated serial connection and connected to the programmable logic device via an I2C bus.

Vegter from the same or similar fields of endeavor teaches the use of I2C control block may be a programmable logic array (**see Vegter col. 3 lines 21-42**), and it is well known in the art to use the service processor via a dedicated serial connection and programmable logic device via an I2C bus.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the I2C control block may be a programmable logic array as taught by Vegter in the modified integrated load balancing among peer server of Leigh and Nakamura in order to provide enhance efficiency in system monitoring solution for interfacing integrated circuits to one another, when it is necessary to interface an external I2C device with a personal computer, additional hardware is typically needed which is expensive, cumbersome to use and not versatile. Thus, the integrated circuit art has not heretofore created a solution for simple and effective I2C interfacing between a personal computer and any I2C device (**see Vegter col. 1 lines 46-54**).

**Regarding claims 13 and 20**, Leigh, Nakamura, and Vegter disclose all the limitations as discussed in the rejection of claims 5 and are therefore claims 13 and 20 are rejected using the same rationales.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Abraham et al. (5530842)

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wutchung Chu whose telephone number is 571 270 1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan D. Orgad can be reached on 571 272 7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2619

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WC/  
Wutchung Chu

EDAN . . ORGAD  
SUPERVISORY PATENT EXAMINER

Eden Orgad 12/29/07